

WATER CONSERVATION NEWS

Department of Water Resources Division of Planning & Local Assistance Water Conservation Office

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Looking Deeply Into the Future of Irrigation

Farmers will meet with representatives of public agencies and public interests in Fresno on February 3-4 to discuss "Irrigation in California—What Is Its Future?" at the 36th annual meeting of the California Irrigation Institute.

Reflecting the State's importance as one of the world's most productive agricultural regions, the conference brings together the full range of expertise on this subject to share the latest technical, scientific, legal, and political developments in every aspect of irrigation.

Speakers at the general session, "Changing How We Manage Water—Risk or Opportunity?," include Don Villarejo, Executive Director

of the California Institute for Rural Studies:

"Communities at Risk: Farmers, Workers, and Townspeople in an Era of Water Uncertainty"; Dr. Peter Gleick, Director of the Pacific Institute for Studies in Development, Environment, and Security: "Critical Issues for California Irrigators—Looking Ahead to the Next Century"; and Assemblyman Mike Machado, Assembly District 17 (Stockton): "Irrigation Water Management—Impacts of Change on the Economy."

Bill Jones, Secretary of State, will speak Wednesday, February 4, at the general session, "The Future of Irrigated Agriculture in California."

(continued on page 2)

Upgraded Delivery System Saves Water and Money

Advances in water-metering systems are helping irrigation officials attack two closely related problems simultaneously—the rising cost of delivering water and the loss of water through antiquated systems.

Consider the situation that Orange Cove Irrigation District (Fresno, California) faced throughout the 1970s and 1980s. The District was delivering water to over 500 customers on 28,000 acres via its system of open ditches which resulted in losing large amounts of water through both evaporation and percolation.

The inefficiency and high cost of this method created widespread support among the citrus growers in the District for developing a new delivery system. Construction, which took about five years, was

(continued on page 4)

CIMIS

CIMIS is useful in determining plant water use—see "CIMIS Network News" charts comparing Davis and Fresno temperature and ETo data on page 16.

Water Conservation News provides information on the latest developments in agricultural and urban water conservation programs. This is a free newsletter published quarterly by the California Department of Water Resources, Division of Planning and Local Assistance, Water Conservation Office.

For more information about DWR's water conservation programs, call Ed Craddock, Chief, Water Conservation Office, at (916) 327-1655; Greg Smith, Urban Water Conservation, at (916) 327-1619; or Baryohay Davidoff, Agricultural Water Conservation, at (916) 327-1788. Information is also available from any of the following DWR District staff:

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(916) 227-7578

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We welcome any comments, suggestions, and story ideas; please send them to:

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CII 36th Annual Meeting

(continued from page 1)

Breakout sessions include "Advances in Irrigation Systems," "Advances in Irrigation Management," "CALFED Update," "Landscape Irrigation," and "Efficient Water Management Planning." There will also be a computer workshop on how to use CIMIS (the California Irrigation Management Information System). See pages 8-9 for the full agenda.

"Participants in last year's conference told us that it was a great opportunity to make professional contacts and that it provided a good mix of management, technical, and practical applications," said CII President Dan Johnson. "We expect that attendees will be similarly impressed with this year's speakers and sessions."

The California Irrigation Institute was founded in 1962 for the purpose of educating the public on all facets of irrigation in California. One of CII's main activities, the annual conference, provides an opportunity to inform all individuals and groups in the irrigation community of the Institute's objectives and the latest ideas and activities toward realizing those objectives. These objectives include increasing public appreciation of irrigation's importance to the economy, urging cooperation among irrigation interests, and educating the public in irrigation knowledge and practice.

Use the form provided on page 10 of this newsletter by January 22 to register for only \$120. Registration at the door will be \$150. Registration includes admission to all sessions, the reception on Tuesday (February 3), lunch on Wednesday (February 4), and delicious and healthy refreshments both days.

For more information, contact Jeanne Duncan, 3555 Gold Creek Lane, Sacramento, California 95827; phone (916) 366-9376; or e-mail jduncan151@aol.com.



Mission Statement of the Water Conservation Office

"To advance the efficient management and use of California's water resources in cooperation with other government agencies and the private sector through technical and financial assistance"



This newsletter is printed
on recycled paper.

Editorial

By Ed Craddock

Monitoring Water Demand with



CIMIS

For many years, State, federal, and local agencies have engaged in cooperative efforts to monitor water supply on a “real-time” basis. DWR’s *Water Supply Outlook* provides information gathered from various agencies on precipitation and snowpack and shows how both precipitation and snowpack can sometimes vary from normal. In addition, DWR’s Cooperative Snow Survey Program gathers water supply data on the Sierra snowpack from various agencies and disseminates this data to those who request it.

This same cooperation is also necessary in monitoring the demand side of the water budget. To this end, State, federal, and local agencies now operate CIMIS (California Irrigation Management Information System), a cooperative weather network that provides “real-time” evapotranspiration (Et) information.

It is important to understand Et rates for a number of reasons. The most important of these is that 25 MAF, or approximately two-thirds of California’s developed water supply, returns to the atmosphere as a result of crop and landscape irrigation.

CIMIS data originally were used for scheduling farm irrigation, but water budgeting soon became a useful practice for landscaping. Currently, almost 50 percent of CIMIS data requests are related to managing urban landscape demands.

Comparing current CIMIS data to a normal or the most recent year is useful in determining how much weather conditions affect a reported change in water use. Questions as to whether conservation, or mild weather, is responsible for a reduction in water use can be answered readily.

DWR expects to have a CIMIS index available at the CIMIS web site in the near future that compares the current year’s reference evapotranspiration (Eto) with the normal year’s Eto. (See page 16 for information on CIMIS and its web site address.) The April 1988 issue of **Water Conservation News** will have more information on how you can quickly determine what effect Et is having on your water use.

Cal Poly Pomona Offers First Four-Year Degree in Landscape Irrigation

Cal Poly Pomona now offers the nation's first four-year degree program in landscape irrigation science.

Faculty members Eudell Vis, Joe Hung, and Ramesh Kumar currently work with only 35 students, a ratio that allows for considerable personal attention and hands-on experience. To augment classes in theoretical principles, students must work as interns in the irrigation industry and complete a senior project before graduation.

"Irrigation is much more complex than most people realize," says Mike Cook, a program graduate who works as an irrigation technical specialist at Rain Bird Gold. "My LIS major allows me to evaluate problems from both a mathematical and horticultural standpoint."

Another LIS graduate, Steve Hohl, who works for Land Concern, Ltd., a landscape architecture firm in Santa Ana, California, credits the program with giving him a "strong theoretical foundation in soil, water, and plant relationships" and "the tools to work in any aspect of the irrigation industry."

Hung notes that the irrigation industry is young and there is a huge market for trained irrigation specialists. Department chair Vis cites, however, a continuing need for industry support. "There is a vital need for scholarships and equipment donations to meet the demand for trained specialists."

Given the importance of water conservation in many communities, it appears that programs similar to Cal Poly's will soon be offered in many parts of the county.

For more information on the landscape irrigation science program, contact Eudell Vis by telephone at (909) 869-2084, by fax at (909) 869-4456, or by e-mail at egvis@csupomona.edu.

Upgraded Delivery System Saves Water and Money

(continued from page 1)

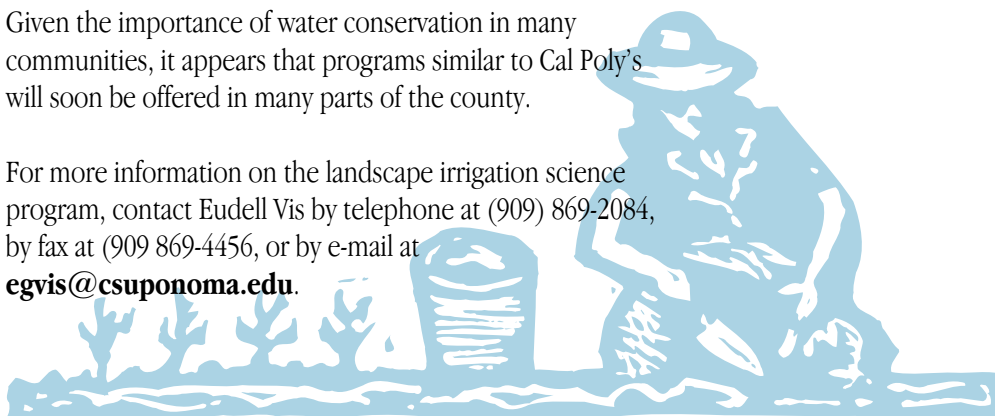
completed in April 1997. The \$13 million project cost was privately financed through certificates of participation, whereby farmers begin paying for their share when deliveries begin.

Approximately 105 miles of pipe replaced the open ditches, with another 11 miles of completely new service pipe expanding the system to 116 miles. Although this change obviously reduced losses experienced under the old system, the lack of meters made an exact accounting of water delivered and used impossible.

The second part of the District's modernization program was the installation of a water meter for each of

the 750 parcels to replace the orifice plates (a hole cut in a pipe) and the "labor saving" practice of delivering water on a 24-hour basis, regardless of the amount actually needed. Each farmer now has a vertical tee tube meter with a rate indicator used to open and close a butterfly valve to a desired flow range and a totalizer to record the amount of water used each month. The accuracy of the meters allows the district to ensure that each user receive the correct share of the water.

"With the meters, we can operate more like a utility," states district engineer/manager Jim Chandler. "The farmer takes the water when it's needed, and pays for only what he uses."



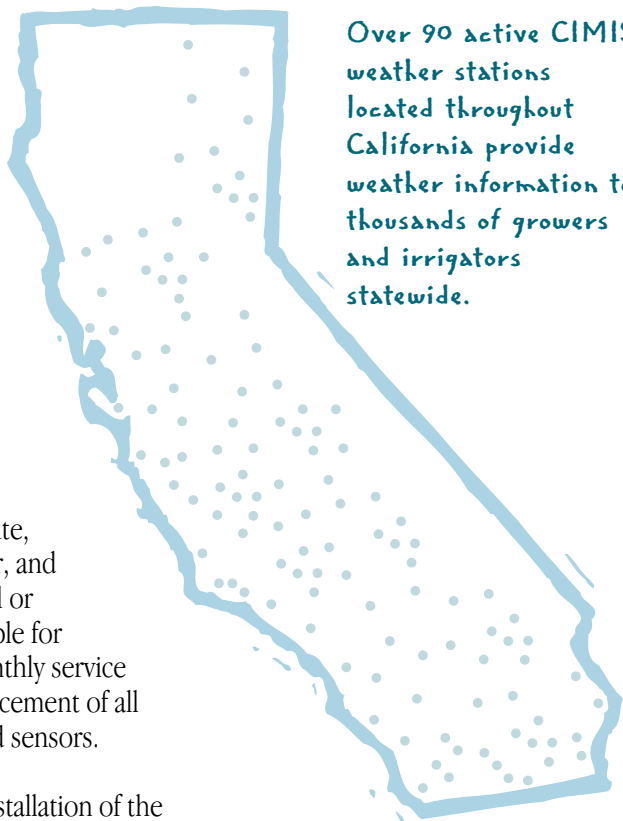
Local Agencies, *Private and Public*, Key to CIMIS' Rapid Growth

CIMIS has grown...well...like a weed in the past 15 years: the number of stations has more than doubled; registered users have increased 15 percent annually; and information dissemination has expanded to include news media, consultants, public and private agency newsletters, and telephone recording systems.

Although CIMIS is identified with the California Department of Water Resources (which also manages the network), its advances and developments would have been difficult without the collaboration of local and private agencies, who provide one or more of the following: all necessary equipment, a suitable station site, irrigation equipment and water, and station maintenance. The local or private agency is also responsible for telephone installation and monthly service charges and the repair or replacement of all weather station equipment and sensors.

In return, DWR provides for installation of the weather station and initial and annual calibration of the sensors. DWR's CIMIS computer calls the weather station every day, checks and flags the date, estimates the Eto, and stores all data for on-demand public access. DWR also helps troubleshoot problems with the weather stations and services the anemometer every six months.

DWR owns and maintains 44 of the CIMIS weather stations. Local and private agencies operate and maintain the other 50 stations.



Over 90 active CIMIS weather stations located throughout California provide weather information to thousands of growers and irrigators statewide.

Water Conservation news briefs

Model Landscape Ordinance Is On The Web

DWR's Model Landscape Ordinance website is up and running. The address is <http://www.dla.water.ca.gov/cgibin/urban/conservation/landscape/ordinance/index>.

Urban Water Management Plans

CALFED's urban water use efficiency proposal includes the "certification" of urban water management plans. Staff has taken the position that the most appropriate role for DWR would be evaluation of plans for technical adequacy, in conformance with the requirements in the California Water Code, with criteria developed in cooperation with urban water agencies. A meeting with the California Urban Water Agencies Planning Managers Subcommittee and CALFED was held in November. There is general agreement that an enhanced technical review of the plans by DWR, in conformance with agreed upon criteria, would be appropriate. For more information, contact Greg Smith at (916) 327-1619; e-mail at gsmith@water.ca.gov.

Landscape Water Management Planning in Orange County

Metropolitan Water District of Orange County and Irvine Ranch Water District staff recently met with DWR to discuss MWDOC's contract to evaluate methods of estimating landscape acreage. A final report is in the last stages of preparation. Irvine Ranch Water District and MWDOC are also preparing a publication on landscape water management in cooperation with the California Landscape Contractors Association. DWR has agreed to provide digital information on the "water use classification of landscape species" and may also consider providing funds for distributing the document statewide. For more information, contact Ed Craddock, DWR, at (916) 327-1655; e-mail at craddock@water.ca.gov.

Static Cotton Prices Squeezing Out Some Growers

It may be, as the commercial claims, "the fabric of our lives," but cotton prices have remained static for the past few

years. At the same time, costs of pest management and equipment continue to rise. The result is that many growers are rethinking future continued planting of cotton and possibly shifting to permanent plantings of almonds, pistachios, and wine grapes. According to Dan Munk (Fresno County Farm Advisor), growers are also rotating acreage to produce other crops (seed alfalfa, silage, tomatoes, melons, sugar beets, etc.) more frequently. Statewide acreage in cotton has declined from 1 million acres in 1996 to 900,000 in 1997, and Earl Williams (California Cotton Growers and Ginners Association) has stated that a loss of another 100,000 acres in 1998 would not be surprising. For further information, contact Dave Scruggs at DWR's San Joaquin District at (209) 445-5262, e-mail at dscruggs@water.ca.gov.

Inglewood Goes Ultra Low Flush

As part of its initial fourth year conservation activity, ExPERT (a community-based organization) has successfully completed distribution of 1,000 ultra-low-flush toilets for the City of Inglewood. The recycling portion of the program took place in November. Other agencies involved include USBR, Metropolitan Water District of Southern California, Southern California Water Company, and Corporation for National and Community Service. For more information, call Keith Watkins at (916) 327-1808; e-mail at kwatkins@water.ca.gov.

10th Annual Agroforestry Meeting

More than 50 people attended a recent Tenth Annual Agroforestry Meeting in Hanford, California. Agroforestry is a management option that the San Joaquin Valley Drainage Program recommends to reduce high saline and selenium drainage water. After a presentation on the progress of ongoing activities and discussion of current and future challenges facing agroforestry systems in California, participants visited demonstration sites in Tulare and Westlands. For information, contact Fawzi Karajeh, DWR, at (916) 327-1828; e-mail at fkarajah@water.ca.gov.

UC Berkeley Study

Reduced Water, Pesticide Use + Higher Yields = Mo' Money

A grower of oranges, olives, and almonds cuts water use by 15 percent. A consultant whose clients grow lettuce, cauliflower, broccoli, and celery reports a 20 percent drop in water use. A walnut grower reports a one-half ton per acre increase in yield. Have these items caught your attention? If so, please continue reading.

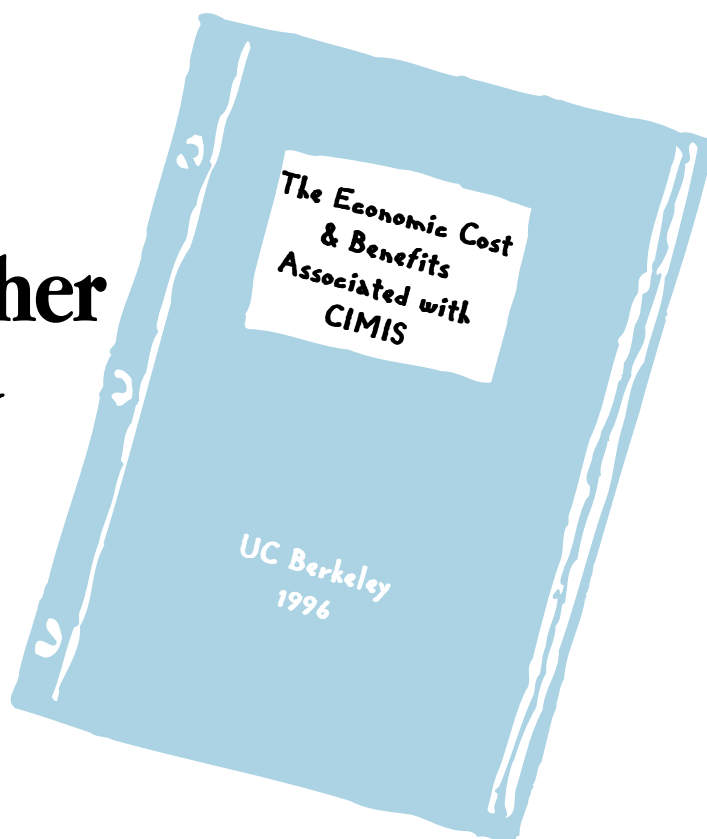
The above-mentioned items are from a 1996 UC Berkeley report, *The Economic Cost and Benefits Associated with CIMIS*, in which researchers interviewed 291 CIMIS users. The primary goals were to identify who benefits from CIMIS and the types and amount of benefits received.

The main benefits that users reported were reduction in applied water, improved yield and quality, and reduced pesticide use. More precise applications of water save systemic pesticides by limiting the amount percolated to groundwater and not absorbed by the plant's roots.

Beside the reduced water use reported above for agriculture, the study also indicated that CIMIS provided significant benefits for urban water as well. Several golf course superintendents reported water use savings of 10 to 25 percent. A landscaping consultant stated that his clients, including several large urban office complexes, reported water reductions from 25 to 59 percent.

Farm advisors reported that many pest control advisors and growers use CIMIS. Little quantitative information was provided, but at least one landscape consultant noted that his overall use of pesticide decreased 50 percent, even with a 40 percent increase in his client base.

To obtain more information or a copy of the report, contact Simon Eching at (916) 327-1836 or e-mail seching@water.ca.gov.



New Publication

Guidelines for the On-site Retrofit of Facilities Using Disinfected Tertiary Recycled Water

Recently produced by the California-Nevada Section of the American Water Works Association, this publication presents concise and easy-to-follow guidelines. The guidelines provide specific direction for retrofitting landscapes, agriculture, commercial, industrial, and impoundment systems to recycled water. Also included is a comprehensive section to guide readers through the often confusing regulatory retrofit maze and provide valuable insights and practical assistance to those involved in the retrofit process.

Endorsed by the California Department of Health Services and the Nevada Division of Environmental Protection, the guidelines may be obtained by calling the California-Nevada Section AWWA Office at (909) 930-1200. Cost of the guidelines is \$30 for AWWA members and \$40 for non-members.

California Irrigation Institute's 36th Annual Meeting

A forum for farmers, agencies, and public interests—February 3-4, 1998

Tuesday, February 3

8:30—10:30 a.m.	Registration	(Foyer)
10:30—10:35 a.m.	Welcome Dan Johnson, President, California Irrigation Institute	(Salon B)
10:35—Noon	General Session: Changing How We Manage Water—Risk or Opportunity?	
Moderator:	Shlomo Pleban, CII Director	
Speakers:	Don Villarejo, Executive Director, California Institute for Rural Studies, "Communities at Risk: Farmers, Workers, and Townspeople in an Era of Water Uncertainty" Dr. Peter Gleick, Director, Pacific Institute for Studies in Development, Environment, and Security, "Critical Issues for California Irrigators—Looking Ahead to the Next Century" Assemblyman Mike Machado, Assembly District 17 (Stockton area), "Irrigation Water Management—Impacts of Change on the Economy"	
Noon	Break for Lunch (no planned activities)	
1:30—5:00 p.m.	Concurrent Sessions	

Advances in Irrigation Water Management (Salon A1)	CALFED Bay-Delta Program (Salon D1)	Landscape Irrigation (Salon D2)
Danyal Kasapligil, CII Director <ul style="list-style-type: none"> • Advances in Measuring Soil Moisture, Blaine Hanson, U.C. Davis • Crop Coefficients for Vegetable Crops, Kurt Schulbach, U.C. Farm Advisor, Monterey County • Grower Use of Enviroscan, Steve McIntyre, Grower, Monterey Pacific, Inc., Soledad 	Tracy Slavin & Betsy Reifsnider, CII Directors <ul style="list-style-type: none"> • Storage and Conveyance Program, Stein Buer, Manager • Ecosystem Restoration Program, Dick Daniel, Manager • Water Use Efficiency Program, Rick Soehren, Manager 	Phil Hitchcock, CII Director <ul style="list-style-type: none"> • Maximizing Irrigation Uniformity and Water Use, Dave Zoldoske, Center for Irrigation Technology, California State University, Fresno • What's New in Landscape Irrigation Products, Dan Gonzales, Vice President of Sales and Marketing, Irrrometer Company, Inc., Riverside
3—3:20 p.m.	BREAK	Salon C
<ul style="list-style-type: none"> • Regulating Deficit Irrigation for Orchard Crops, David Goldhamer, U.C. Kearney Agricultural Center, Parlier, California • CIMIS Web Tutorial, Richard Mead, Agrilink International, Clovis • Developing Precision Agriculture for Management Decisions, Brock Taylor, Precise Advice Agronomics, Escalon 	<ul style="list-style-type: none"> • Stakeholders' Perspective <ul style="list-style-type: none"> —Urban, Mary Ann Dickenson, Metropolitan Water District of Southern California —Environmental, Roberta Borgonova, League of Women Voters —Agricultural, Stuart Pyle, Consulting Engineer 	<ul style="list-style-type: none"> • Turf Audits—Finding the Flaws in Your Irrigation System, Kerwin Russell, Riverside-Corona Resources Conservation District • Irrigating the Landscape: When and How Much, Phil Hitchcock, Metropolitan Water District of Southern California

5:00—7:00 p.m.	Reception Hosted by Exhibitors	Salon C
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Meeting—Irrigation in California, What Is Its Future?

1998, Holiday Inn—Centre Plaza, 2233 Ventura Street, Fresno, California

Wednesday, February 4

7:30—9:00 a.m. Continental Breakfast and CII Business Meeting Election of Officers and Directors (attendees welcome) Salon D3
9:00—Noon Concurrent Sessions

Advances in Irrigation Systems (Salon A1)	Efficient Water Use (Salon D1)	Landscape Irrigation (Salon D2)
Blaine Hanson, CII Director <ul style="list-style-type: none"> • Advances in Drip Irrigation for Row Crops, Danyal Kasapligil, Monterey County Water Resources Agency • Skip Row Furrow Irrigation, Blake Sanden, U.C. Farm Advisor, Kern County • Survey on Linear-move Sprinkler Machines, Dave Zoldoske, Center for Irrigation Technology, California State University, Fresno 	Baryobay Davidoff, Chief, Agricultural Water Conservation Unit, California Department of Water Resources & Betsy Reifsbmider, CII Director <ul style="list-style-type: none"> • Is Water Conservation Worth the Price? Case studies in Real Life <ul style="list-style-type: none"> — Richard Roos-Collins, Attorney, Natural Heritage Institute and Co-Chair of the Agricultural Water Management Council, representing environmental interest groups — Roger Reynolds, Civil Engineer, Joe Summers Engineering, Inc. and Co-Chair of the Agricultural Water Management Council, representing agricultural water suppliers 	Yoneo Ono, CII Director <ul style="list-style-type: none"> • WICK—Microflood Irrigation for Turf, Edward M. Norum, Center for Irrigation Technology, Fresno
10:20 a.m.—10:40 a.m.	BREAK	Salon C
<ul style="list-style-type: none"> • Grower's Experience with a Linear-move Sprinkler Machine, Clark Gregory, Chowchilla • Grower's Experience with Subsurface Drip Irrigation on Tree Crops, Chuck Nichols, Hanford • Management of Subsurface Drip Irrigation Systems, Claude Phene, SDI+, Clovis 	<ul style="list-style-type: none"> • Is Water Conservation Worth the Price? Case studies in Real Life <ul style="list-style-type: none"> — David Todd, City of Fresno — Kirk Brewer, Southern California Water Agency — Chris Dundon, Contra Costa Water District 	<ul style="list-style-type: none"> • Distribution Uniformity, Greg Jorgensen, Center for Irrigation Technology, Fresno

Noon Luncheon and Awards—CII Scholarship Award and CII Irrigation Person of the Year Award Salon B

1:30—3:00 p.m. General Session—"The Future of Irrigated Agriculture in California" Salon B
Moderator: Dan Johnson, President, CII
Speaker: Bill Jones, Secretary of State, State of California
3:00 p.m. Adjourn
3:00 p.m. Board of Directors Meeting Salon B

California Irrigation Management Information System Workshops—Salon G

Once again, the CII conference is offering CIMIS workshops for growers and large turf managers. Participants will get hands-on experience using CIMIS' user-friendly software to calculate the water needs of crops or turf—and learn to save time, money, energy, and water. The workshops dates and times are:

Tuesday, February 3, 1998

1:30 to 3 p.m.
3:30 to 5 p.m.

Wednesday, February 4, 1998

8:30 to 10 a.m.
10:30 a.m. to noon

HOTEL REGISTRATION INFORMATION**Make your hotel reservations directly with:**

Holiday Inn—Centre Plaza
2233 Ventura Street
Fresno, CA 93721
Phone: (209) 268-1000
Fax: (209) 268-7212

We have received special convention rates of \$76 single or double (plus tax). To assure hotel space and receive the special rate, you must:

1. Call the hotel directly.
2. Identify yourself as attending the California Irrigation Institute meeting.
3. Make your reservations by January 22, 1998.

CONFERENCE REGISTRATION INFORMATION

Registration includes admission to all sessions, refreshments, the reception on Tuesday, and lunch on Wednesday.

REGISTRATION FEES

Pre-registration (by January 22)	\$120
Registration (after January 22)	\$150
Student	\$ 25
Exhibitors (includes 1 registrant)	\$250

Holiday Inn—Centre Plaza
2233 Ventura Street
Fresno, California 93721

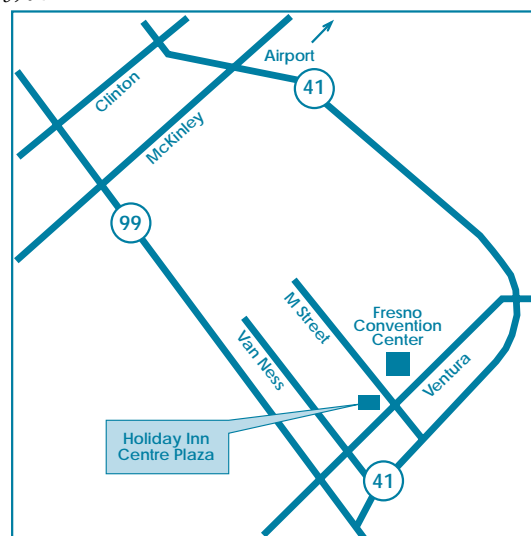
Phone: (209) 268-1000
Fax: (209) 268-7212

SEND "CONFERENCE REGISTRATION FORM AND MEMBERSHIP CARD" AND CHECK TO:

California Irrigation Institute, Inc.
c/o William I. DuBois
1127—11th Street, #626
Sacramento, CA 95814
(916) 446-4647

EXHIBITORS

Exhibit registration forms and information may be obtained from:
Danyal Kasapligil Phone: (408) 755-4860
Monterey County Water Resources Agency Fax (408) 424-7935
P.O. Box 930
Salinas, CA 93902



Conference Registration Form and Membership Card

Name _____

Title _____ Telephone _____

Organization _____

Address _____

City _____ State _____ Zip Code _____

Check or money order to CII, Inc. enclosed. Amount \$ _____

☐ Yes, I do ☐ No, I do not

want to be a voting member of the California Irrigation Institute, Inc. (There is no fee.)

Signature _____



Please check here if you plan to attend one of the CIMIS Workshops.

** Exhibitors will need to fill out separate registration forms.*

Make check payable to CII, Inc. Sorry, we cannot accept government purchase orders.



Water-Related Laws for 1998

A number of significant water-related bills were signed into law in 1997 and take effect January 1, 1998. Here are some of them.



◆ **AB 11—Fish and Game Code**

Amends Section 5650 of the Fish and Game Code, changing the terms under which parties charged with violating water pollution control laws may use an affirmative defense.

◆ **AB 1571—Budget Amendment**

Appropriates \$7.518 million from the State General Fund to DWR for the following purposes: \$1.4 million to The Reclamation Board for support staff to work with the U.S. Army Corps of Engineers to repair 1997 flood damage under Public Law 84-99; \$703,000 for flood forecasting; and \$5.415 million for predeployment and planning for events related to the predicted El Niño storms.

◆ **AB 1522—Water Recycling**

Defines the types of buildings that qualify for the dual plumbing systems needed to use recycled water. Specifically mentioned are prisons; military barracks; dormitories; some apartment buildings and hotels; and commercial, retail, and office buildings.

◆ **SB 231—Incidental and Inadvertent Taking**

Authorizes the Department of Fish and Game and agricultural experts to propose by July 1, 1998 regulations for locally designed voluntary programs on farms and ranches to encourage habitat for candidate, threatened, and endangered species. Authorization for these voluntary programs would be automatically renewed until December 31, 2002. Accidental take of species is not prohibited.

◆ **SB 543—DWR Loans and Grants**

Authorizes loans from the 1984 Clean Water Bond Fund, the 1986 Water Conservation and Water Quality Bond Fund, and the 1988 Water Conservation Fund for approved projects and expands DWR authority to write contracts containing indemnification clauses.

◆ **SB 1082—Water Conveyance Facilities**

Requires the Department of Water Resources to assist the Colorado River Board and six California water agencies that receive Colorado River water to develop a plan to ensure that California abides by the court-ordered entitlement of 4.4 million acre-feet. Requires DWR to issue a recommendation specifying terms and conditions of a water transfer between the San Diego County Water Authority and the Metropolitan Water District of Southern California.

◆ **SB 1307—Public Water Systems**

Conforms the State Drinking Water Law to the federal Safe drinking Water Act; establishes the statutory framework for a

(continued on next page)

Water-Related Laws for 1998

(continued from previous page)

State revolving fund for loans and grants to public water systems in order to take advantage of federal money available to states for the upgrade of public water supplies and infrastructure improvements.

◆ **ABX 11—1997-98 Capital Outlay Appropriation**

Appropriates \$4.705 million from the State General Fund to DWR for 10 capital outlay or feasible studies projects recommended by the Governor's Flood Emergency Action Team.

◆ **SBX 4—Funding FEAT Recommendations**

Appropriates \$3.6 million from the State General Fund to DWR for five prescribed support budget change proposals recommended by the Governor's Flood Emergency Action Team.

◆ **SBX 11—1996-97 Capital Outlay Appropriation**

Appropriates \$10.4 million, plus a \$3 million contingency, from the State General Fund to DWR for repairs of State or federally constructed flood, erosion, and sediment projects.

CALFED Narrows Bay-Delta Alternatives

The CALFED Bay-Delta Program is nearing completion of a narrowing process that will result in a preferred alternative for addressing problems facing the San Francisco Bay-Sacramento/San Joaquin River Basin, the key component in a water system that supplies more than 23 million Californians with some or all of their drinking water.

At issue are a number of "distinguishing characteristics" that, when applied to current options, will help to identify a preferred alternative. Such an alternative would reduce conflicts in the system, be equitable, affordable, durable, implementable, and have no significant negative impacts.

"We are in the home stretch of more than two years of hard work," says Lester Snow, CALFED's executive director. "The process we're in now will help to set the stage for an informed, productive public review process."

In cooperation with various public working groups and advisory committees, CALFED has identified a number of possible solutions to the problems facing the Bay-Delta system. These solutions, called "alternatives," are now being assessed so that the next project document, the *Programmatic Environmental Impact Statement/Environmental Impact Report*, will identify a preferred alternative, or set of actions, that would best achieve the Program's goals.

"Our goal in narrowing the alternatives is to give thoughtful, informed analysis of the options developed during the past two years and then to provide that analysis to the public," says Snow. "The complexity and interconnectedness of the problems we're dealing with make it crucial that we provide a solid foundation for an informed public debate."

For more information about the CALFED Bay-Delta Program, call (916) 657-2666 or visit their website <http://calfed.ca.gov>.

DWR/USBR

Water Conservation Information Committee Meets at Cal Poly Pomona in February

A busy and informative two days awaits those attending the third meeting of the joint California Department of Water Resources and U.S. Bureau of Reclamation Water Conservation Information Committee, February 18 and 19 at Cal Poly Pomona. The University's Agricultural Engineering and Landscape Irrigation Science Departments will serve as hosts.

In addition to the usual interesting and varied presentations dealing with a range of water conservation problems and solutions, this meeting also includes two panels of irrigation industry representatives assembled by the Irrigation Association's national office. The national office also will pick up the check for a buffet social on the evening of February 18.

The complete agenda for both days is shown at the right.

Lodging is available at Kellog West for those planning to attend both days. Rooms are \$70 (single) and \$80 (double), including a buffet breakfast. Call (909) 869-2222 for reservations.

Deliciously wonderful refreshments and lunch on February 19 will be provided at a cost of \$20. Please call Arturo Carvajal at (916) 327-1622 for information.

AGENDA

February 18, 12:30–5 p.m.

Agricultural Engineering and Landscape Irrigation Science Department

- Wick Irrigation of Landscapes
- Tour of Center for Regenerative Studies (sustainable living unit)
- Tour of Land Lab (potential uses of Los Angeles County landfill)

February 18, 6–8 p.m.

Kellog West Conference Center

- Buffet social sponsored by the Irrigation Association

February 19, 9 a.m.–3 p.m.

WCIC Meeting—Kellog West Conference Center

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|-------------------|--|
| 9–9:20 a.m. | Welcome and Introductions |
| 9:20–9:40 a.m. | Welcome to Cal Poly Pomona |
| 9:40–10 a.m. | Private/public partnering for Mobile Lab programs |
| 10–10:30 a.m. | Estimating landscape demands |
| 10:30–10:45 a.m. | Break |
| 10:45–11:45 a.m. | Irrigation Association Panel: <i>Effective as Well as Efficient</i> |
| 11:45 a.m.–1 p.m. | Lunch |
| 1–1:20 p.m. | Cal Poly Landscape Irrigation Science Curricula |
| 1:20–2:20 p.m. | Irrigation Association Panel: <i>Slightly Out of the Main Stream</i> |
| 2:20–2:50 p.m. | Update of State and Federal Programs |
| 2:50–3 p.m. | Close and Next Meeting |



◆ **January 10, 1998**

BAEER Fair 21

Marin Civic Center
San Rafael, California

Cost: General Admission—\$7

For information contact Ken Hanley at (510) 657-4847.

This is the largest environmental education event designed specifically for the teaching community. Public and private school instructors, administrators, naturalists, home-based educators, and others are invited to attend.

◆ **January 23, 1998**

Basic Sprinkler Irrigation Design

Cal Poly-Pomona, Building 45
Pomona, California

Time: 9 a.m. to 2 p.m.

Instructors: Dr. Ramesh Kumar and Eudell Vis, Professors of Agricultural Engineering and Irrigation Science

Fee: \$50 (includes lunch); non-credit

For more information contact Liz Davenport at (909) 869-2220, or Eudell Vis at e-mail

egvis@csupomona.edu.

This course is for people who can benefit from understanding irrigation design principles. Those employed by municipalities and school districts, those in sales, landscape maintenance, water conservation, and similar positions can increase their understanding of proper system design.

◆ **January 27-28, 1998**

“Achieving the New Landscape BMP”

Sponsors: California Urban Water Conservation Council,
Council for a Green Environment (CGE)

U.C. Berkeley

Berkeley, California

Cost: \$140

For information call Gladys Martinez, CGE, at (916) 442-7195.

This is a one-and-a-half-day presentation and discussion of innovative programs and technology developed in response to the recently revised statewide Best Management Practices.

◆ **January 30, 1998**

Drip Irrigation Design and Installation

Cal Poly-Pomona, Building 45
Pomona, California

Time: 8:30 a.m. to 2:30 p.m.

Instructors: Dr. Ramesh Kumar and Eudell Vis, Professors of Agricultural Engineering and Irrigation Science

Fee: \$95 (includes lunch)

For more information contact Liz Davenport at (909) 869-2220, or Eudell Vis at e-mail

egvis@csupomona.edu.

This course is for people who can benefit from understanding drip irrigation design principles. Those employed by municipalities and school districts, those in sales, landscape maintenance, water conservation, and similar positions can increase their understanding of proper drip system design and installation.

◆ **February 3-4, 1998**

"Irrigation in California—What Is Its Future?"

Holiday Inn Centre Plaza

Fresno, California

Cost: \$120 (registration by 1/22/98); \$150 at the door

For more information call (916) 366-9376.

This will be the 36th Annual Meeting of the California Irrigation Institute. (See pages 1 and 2 and 8 through 10 for details.)

◆ **February 7-9, 1998**

1998 AWWA Conservation Division Mid-Winter Meeting and Water Shortage Planning Workshop

Hyatt Regency

Austin, Texas

For information call Susan Miller at (303) 347-6181.

Workshops will include "Peaking Design," "Water Contingency Planning," and "Pricing Policy."

◆ **February 18-19, 1998**

Water Conservation Information Committee Meeting

California Polytechnic University

Pomona, California

Lunch: \$20

For lunch reservations call Arturo Carvajal at (916) 327-1622.

Lodging: \$70 single/\$80 double

For lodging reservations call Kellog West at (909) 869-2222.

This is the third meeting of the California Department of Water Resources/U.S. Bureau of Reclamation Water Conservation Information Committee.

◆ **April 8, 1998**

California Urban Water Conservation Council

Sacramento, California

Costs: None

For more information contact Denise Phelps, CUWCC, at (916) 552-5885.

◆ **May 14-16, 1998**

"Russian River Watershed Symposium—A Living System in Transition"

Luther Burbank Center

Santa Rosa, California

Co-hosts: Russian River Symposium Steering Committee and Sonoma County Water Agency

For information call Shannon Wesley at (707) 521-2104.

Topics include watershed management, agriculture, the timber and gravel industries, flooding, endangered species, wildlife preservation, and water quality, reuse, and supply/demand.

◆ **June 3-6, 1998**

14th Technical Conference on Irrigation, Drainage, and Flood Control

Phoenix, Arizona

For information call Larry D. Stephens at (303) 628-5430.

The theme of this U.S. Committee on Irrigation and Drainage event is "Contemporary Challenges for Irrigation and Drainage." Topics of the five technical sessions will be "Drainage Discharge Limitations," "Improving Irrigation Management Practices Under Conditions of Water Scarcity," "Innovative Approches to Modernization of Irrigation and Drainage Systems," "Sustainable Use of Marginal Quality Water for Irrigation," and "Social, Environmental, and Economic Issues and Policies Affecting Irrigated Agriculture."

◆ **August 3-7, 1998**

1998 International Conference on Water Resources Engineering—with Groundwater Management Symposium, Hydrology and Hydraulics of Wetlands Mini-Symposium, and Bank Stabilization Mini-Symposium

The Peabody Hotel

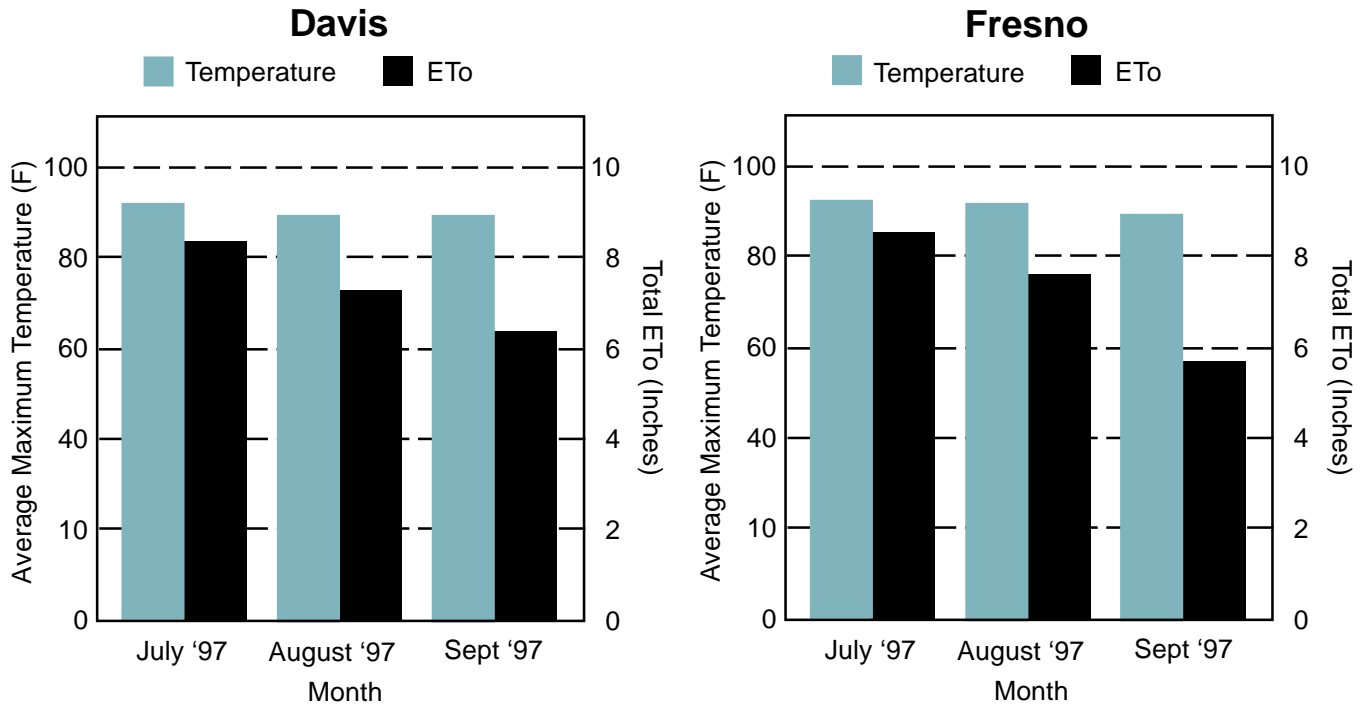
Memphis, Tennessee

Cosponsors: Water Resources Engineering Division, American Society of Civil Engineers; West Tennessee Branch, Tennessee Section, ASCE; and Ground Water Institute, University of Memphis

For information contact ASCE/Conference Department, 1801 Alexander Bell Drive, Reston, Virginia 20191-4400; telephone (800) 548-2743 or (703) 295-6300; fax (703) 295-6144; e-mail conf@asce.org; web site <http://www.asce.org>.

CIMIS Network News

Average Maximum Temperature and Total Monthly ETo for CIMIS Station No. 6 (Davis) and CIMIS Station No. 80 (Fresno) During July, August, and September 1997



The charts above show that monthly average maximum temperature alone is not a good indicator of plant water use. In both Davis and Fresno, the maximum temperature in September was 3 percent less than in July—while ETo was 25 to 35 percent less.

ETo is an estimate of water use of grass that provides an index of water use for all kinds of vegetables. ETo is estimated by weather stations that are part of the California Irrigation Management Information System (CIMIS).

CIMIS data is available free to the public. For more information on CIMIS, visit our web site at <http://wwwdpla.water.ca.gov/cgi-bin/cimis/cimis/hq/main.pl>, or contact DWR staff listed on the inside front cover of this newsletter.

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